

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dai Huang et al.
Serial No: 10/720,841
Filed: November 24, 2003
For: Manufacture of Carbon/Carbon Composites By Hot
Pressing
Examiner: Matthew J. Daniels
Group No. 1732
Attorney's Docket No. P2023/N9028
Customer No. 23456

DECLARATION UNDER 37 C.F.R. § 1.131

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

VIA electronically to
Art Unit 1732
Examiner Matthew J. Daniels

Dear Commissioner:

Irwin C. Lewis, one of the Applicants in the above-identified application,
declares as follows:

1. I have been an employee of UCAR Carbon Company, Inc. (UCAR) assignee of the above identified patent application and retired from UCAR in April, 2003, as a senior corporate fellow, after 43 years of service. Since that time I have continued to serve as a consultant to UCAR on various projects at their request. I am a named inventor in the application and I am familiar with the subject matter.
2. I have read and understand the Office Action mailed on February 7, 2006 in connection with the above-identified application.

3. I have read and understand the Huang, et al. patent (U.S. 6,699,427), cited in the Office Action. I am a named inventor in the Huang, et al. '427 patent and I am familiar with the subject matter. The Huang, et al. '427 patent issued on March 2, 2004 and has an effective filing date of July 26, 2002.

4. I make this Declaration under 37 C.F.R § 1.131 to present a showing of facts to establish completion in this country of the invention claimed in the current application before the Huang, et al. '427 patent effective date.

5. The Office Action used the Huang et al '427 patent under § 102(e) to reject Claims 1, 2, 6-12, and 19 and under § 103(a) in combination with Kalnins (4,252,513) to reject Claims 2, 3, 4, and 19.

6. As seen on the face of the Huang et al '427 patent, the Huang et al '427 patent has been assigned to UCAR.

7. All of the acts herein after described took place in the United States. Attached hereto are pages from laboratory notebooks numbered 195-129 and 195-130 and pages from laboratory notebook 728-3. Only the dates have been redacted.

8. I am the first named researcher on the face of each laboratory notebook 195-129 and 195-130 and I have reviewed the attached pages from laboratory notebook 728-3 of inventor Dai Huang along with idea records CP 02-001-003 of inventors Huang and Lewis. The notebooks and the idea records describe a method of forming a composite material comprising combining carbon-containing fibers, a carbonizable matrix material which includes pitch, and a friction additive to form a mixture. Heating the mixture to melt at least a portion of the matrix material by

applying an electric current to the mixture and applying a pressure of at least 35 kg/cm² to the mixture to form a compressed composite material. The preforms containing the friction additive were baked to fully carbonize the carbonizable material and then were heat treated to a final temperature of at least about 1500°C to form the composite material having a density of at least about 1.7 g/cm³.

9. The notebooks and idea records also describe a method of forming a composite material comprising compressing a mixture of carbon fibers, and a matrix material which includes pitch. A current was applied to the mixture to achieve a temperature of at least 500 °C and to form a compressed perform and the compressed preform was impregnated with the friction additive. The impregnated preforms were baked to fully carbonize the carbonizable material and the impregnated preform was heat treated to a final temperature of at least about 1500 °C to form the composite material having a density of at least about 1.7 g/cm³.

10. The invention that is the subject matter of the above-identified application was conceived and reduced to practice at least as early as the effective filing date of July 26, 2002 which is relied upon for the rejections in the outstanding Office Action.

11. I further state that the above statements were made with the knowledge that willful false statements and the like are punishable by fine and/or imprisonment, or both, under § 1001 of Title XVIII of the U.S. Code, and any such willful false statements may jeopardize the validity of this application or any patent resulting therefrom.

Irwin C. Lewis
Irwin C. Lewis

4/13/07
Date